NASA HQ "Remote Access/Work at Home" Policy

NASA Headquarters provides remote access through a NASA HQ provided dial-in service. This service offers 56 kbps and 33.6 kbps dial-in access through both local and 800 numbers. A full set of instructions for accessing the remote dial-in service is furnished to users.

Policy/Guidelines. NASA has established a telecommuting policy. Approximately 10 personnel are working at home under this policy, the number is expected to grow. For personnel approved by Code C management, Code CI will provide a computer system and software upon request. Also upon request, Code CI will provide a telephone line (installation and monthly usage) and/or a fax machine.

Beyond the formal telecommuting policy, many HQ personnel perform work at home and while on travel utilizing both personal and NASA owned equipment. Over 700 dial-in accounts have been issued. There are approximately 16 NASA owned desktop computers located at employees' homes, in addition to approximately 270 laptop computers assigned to individual users. Many NASA and contractor users use personally-owned equipment for NASA work. NASA owned equipment and software is provided for home use when authorized and approved via an IRM Service Request (SR). Provision of software is dependent on availability of existing licenses and the ability to purchase new licenses for home use.

Infrastructure. The HQ Full Service Dial-In infrastructure is built around two Ascend Max 4004s, which are high-performance wide area network access switches designed for central site remote access applications such as telecommuting and internet access. The MAX 4004s use high-speed digital access lines to connect to the WAN, replacing separate analog access lines, modem racks, routers and terminal servers with an integrated, secure and manageable bandwidth-on-demand solution.

Each MAX 4004 can be configured to provide up to 96 simultaneous dial-up connections, 72 of which can originate from analog modem users. The current HQ implementation supports a total of 69 simultaneous dial-in users at speeds up to 56K for analog modem users and 128K for ISDN users; however, 2 B channels (1 B = 64K) are required to obtain a 128K connection resulting in fewer simultaneous connections. Three ISDN PRI circuits connect HQ to the telephone network, and 10BaseT ethernet cards in the 4004s provide access to the HQ local area network.

Security. Security for remote access is provided through both policy and technical means; access to private NASA services is provided only after strong authentication to identify the user. Strong authentication for dial-in users is achieved through the use of Security Dynamics' SecurID. HQ dial-in users are issued a SecurID token. Each user has a memorized PIN or password, which they combine with a pseudorandom value displayed on their SecurID token. The combination creates a passcode which is passed to an authentication server which verifies the information before allowing access.

Problem Resolution. Support for NASA owned equipment and software at home is as follows:

- No contractor or NASA personnel are dispatched to troubleshoot, install or test equipment and software at private residences of NASA Headquarters employees.
- If a NASA Headquarters employee has computer hardware and software at home that has been properly authorized and is being used for NASA business, support is provided during the normal business hours (7:30 am - 5:00 pm, Monday through Friday, excluding holidays) in accordance with the following procedures:
    - If a hardware problem is suspected the customer is required to bring the piece of equipment back to the NASA Headquarters building and then call the Service Center (358-HELP) for assistance during normal business hours.
    - If a system or application software problem is suspected, the customer can call the Service Center during normal business hours. Telephone assistance is provided only on software that has been properly licensed and provided by NASA Headquarters. If the problem cannot be resolved over the phone in less than one hour, further assistance can only be obtained by returning the computer to the NASA Headquarters building and contacting the Service Center.

All service calls for at-home computer hardware and software are logged into the Work Control System and must be clearly identified as such. NEMS property tag numbers must be furnished upon request.

Software for home use is available for Headquarters products where licenses allow.

Resolution of problems with personally owned computers at users' homes is the responsibility of the user, but the Help Desk provides information that may assist users in trouble-shooting.